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DESI DENNIS

RESPIRATORY THERAPISTS' ROLE
IN SPECIAL PROCEDURES

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RESP 373b
OCTOBER 7, 2000

STATEMENT

Respiratory care practitioners are responsible for a broad range of therapeutic and diagnostic procedures that undoubtedly relate to their profession. Yet, some special procedures have not been completely transitioned under the responsibility of respiratory care practitioners even though they are most qualified to handle such procedures. Among these are fiberoptic bronchoscopies and hemodynamic monitoring. Respiratory care practitioners should be actively involved in these two special procedures because of their clinical training and scope of knowledge.

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INTRODUCTION

This project focuses on roles that respiratory care practitioners play during therapeutic and diagnostic bronchoscopy procedures and data interpretation of hemodynamic monitoring. Information relating to both special procedures will be reviewed along with reasons why respiratory care practitioners should be the healthcare professionals that are assisting.

The objective of these procedures is to provide the best diagnostic and/or therapeutic value to the patient as possible. Respiratory care practitioners are in excellent positions to assure accurate interpretation of results and assist with the procedures whenever necessary. Any other professionals involved in these procedures should be questioned to verify they are not performing out of their occupational scope of practice.

SIGNIFICANCE AND HYPOTHESIS

Fiberoptic bronchoscopy and hemodynamic monitoring fall within the respiratory care practitioner's scope of practice. Other professionals may be trained in certain aspects of both procedures, but respiratory care practitioners have an in-depth knowledge that equips them for optimal assistance and reliable data interpretation. Hypothesis: Even though respiratory care practitioners are best trained to assist and interpret information from fiberoptic bronchoscopies and hemodynamic monitoring, other healthcare professions are still assisting in these procedures.

STATEMENT OF THE PROBLEM

In many hospital settings, respiratory care practitioners are not assisting with bronchoscopies and do not interpret data gathered from hemodynamic monitoring. Since they do not assist, who is providing the necessary assistance when these special procedures are performed? Are there any guidelines in the respiratory care department concerning these two procedures? Such research questions have been probed and will be discussed later in this paper.

REVIEW OF LITERATURE

Fiberoptic bronchoscopy (FOB) now is the most commonly used invasive procedure in pulmonary medicine (Prakash 1999). Diagnostically, FOB has been used for lung tumors, infections, airway obstructions, hemoptysis investigation, and many other reasons. Therapeutically, it has been used for removal of foreign objects, clearance of mucus plugs responsible for lobar or segmental atelectasis, and the need for aid in performing difficult intubations (AARC Guidelines 1993). Many studies have proven the procedure safe and reliable. One such study concluded that FOB in the ICU is safe, contributes valuable diagnostic information, and is useful for therapeutic purposes (Turner, Willcox, Hayhurst, Potgieter, 1994).

Even though FOB has been proven a very safe procedure, any invasive maneuver has complications and risks involved. Adverse side effects from FOB include bronchospasm and laryngospasm, ventilation/perfusion abnormalities, hemorrhage, and pneumothorax (Toben & Kelly, 1981). Such complications suggest that the clinicians involved should be knowledgeable of the physiological causes of each emergency and thoroughly trained to respond with the appropriate solution.

Hemodynamic monitoring with a pulmonary catheter equips clinicians with valuable information of a patient's circulatory pressures. Such information can be vital in certain patients. Changing conditions in patients suffering from ARDS, hypovolemia, CHF, cor pulmonale, and pulmonary hypertension can be

monitored by pulmonary artery catheterization (Oaks, 1996). Iberti, Fischer, and Leibowitz conducted a study that examined the knowledge of clinicians that used pulmonary artery catheters (1990). They concluded that those studied had very little understanding about interpreting information from hemodynamic monitoring, which other studies later replicated. Brandstetter et al believed that incomplete user knowledge about certain limitations (i.e., ventilation with or without positive end-expiratory pressure, position of catheter in thorax, and presence or absence of chronic obstructive pulmonary disease) have been ignored by authors of previous studies when judging correct interpretation of data (1998). They also concluded that the usefulness of a pulmonary catheter would never be demonstrated unless the practitioner is knowledgeable and gives attention to the technical and physiological factors that influence interpretation of data.

METHOD OF STUDY

I obtained a list of hospitals approved from the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) for the northern and central Illinois area. A list of all hospitals inspected by JCAHO and their accreditation status can be obtained from their website at www.qualitycheck.com. The hospitals had to meet the criteria of having at least 125 beds and an intensive care unit. The target population will be the department director of the hospital's respiratory care services since he or she should have a general knowledge of the capabilities and scope of practice of the respiratory therapists at that particular institution. A survey will be sent to 30 hospitals that were selected randomly. The survey is designed to gather information about the capabilities of respiratory therapists in gathering, analyzing, and implementing data obtained from fiberoptic bronchoscopies and hemodynamic monitoring. A list of the hospitals participating in the survey, query letter, and the actual survey follows.

List of Hospitals

Abraham Lincoln Memorial Hospital	Lincoln, IL
Carle Foundation Hospital	Urbana, IL
Condell Medical Center	Libertyville, IL
Decatur Memorial Hospital	Decatur, IL
Edward Hines Jr. VA Hospital	Hines, IL
Good Samaritan Hospital	Downers Grove, IL
Kewanee Hospital	Kewanee, IL
Kishwaukee Community Hospital	DeKalb, IL
Mason District Hospital	Havana, IL
McDonough District Hospital	Macomb, IL
The Methodist Medical Center of Illinois	Peoria, IL
Methodist Hospital of Chicago	Chicago, IL
Midwestern Regional Medical Center	Zion, IL
Northwest Community Hospital	Arlington Heights, IL
Oak Park Hospital	Oak Park, IL
OSF Saint Francis Medical Center	Peoria, IL
OSF St. Joseph Medical Center	Bloomington, IL
Proctor Hospital	Peoria, IL
Provena Saint Joseph Hospital	Elgin, IL
Provena Saint Therese Medical Center	Waukegan, IL
Provena United Samaritans Medical Center	Danville, IL
Ravenswood Hospital Medical Center	Chicago, IL
Resurrection Medical Center	Chicago, IL
Richland Memorial Hospital	Olney, IL
Rockford Medical Hospital	Rockford, IL
South Suburban Hospital - Advocate	Hazel Crest, IL
St. Francis Hospital of Evanston	Evanston, IL
St. Francis Hospital and Health Center	Blue Island, IL
St. John's Hospital	Springfield, IL
St. Mary's Hospital	Decatur, IL

November 26, 2000

Dear Respiratory Department Director,

My name is Desi Dennis and I am a respiratory therapy student at Southern Illinois University. I am researching the roles of respiratory therapists in special procedures pertaining to fiberoptic bronchoscopy and hemodynamic monitoring. I would appreciate it if you will take a brief moment and fill out the survey to the best of your knowledge. All names of individuals and hospitals will be withheld for confidentiality. Your response will greatly assist the results of my research and my overall grade! Once you have completed the survey, please return it in the envelope provided. If you have any questions, I can be reached at (217) 442-7069. Thanks for your cooperation.

Sincerely,

Desi Dennis

SURVEY

Size of your institution—_____ beds

1. Have you been formally (school) or clinically trained on fiberoptic bronchoscopy procedures?
____yes (formally), ____yes (clinically), ____no
2. Does your institution perform fiberoptic bronchoscopies?
____yes, ____no
3. Are respiratory therapists assisting the bronchoscopist before, during, or after the procedure?
____yes (before), ____yes (during), ____yes (after), ____no (then who does?) _____
4. Can the respiratory therapists at your institution perform the actual bronchoscopy procedure in case of emergency if a pulmonologist is absent?
____yes, ____no
5. Are the respiratory therapists capable of analyzing and interpreting information gathered from a bronchoscopy procedure?
____yes, ____no
6. What is the main purpose for using fiberoptic bronchoscopy at your institution? _____

7. Are all of the respiratory therapists proficient in correctly analyzing data from hemodynamic monitoring?
____yes, ____no
8. Do any respiratory therapists actually perform the procedure (catheter insertion)?
____yes, ____no
9. Are there any guidelines concerning hemodynamic monitoring in your department?
____yes, ____no if yes, specify: _____
10. Are there any guidelines or protocols regarding fiberoptic bronchoscopy procedures?
____yes, ____no if yes, specify: _____

COMMENTS:

THANK YOU

NUMERICAL SURVEY RESULTS

1. TRAINED ON FIBEROPTIC BRONCHOSCOPY PROCEDURES (n = 23)

YES (formally)	17%
YES (clinically)	26%
NO	57%
2. INSTITUTIONS THAT PERFORMED FIBEROPTIC BRONCHOSCOPIES (n = 23)

YES	100%
NO	0%
3. DO RESPIRATORY THERAPISTS ASSIST BRONCHOSCOPIES? (n = 23)

YES (before)	9%
YES (during)	13%
YES (after)	4%
YES (throughout)	26%
NO	48%
4. CAN RESPIRATORY THERAPISTS PERFORM ACTUAL BRONCHOSCOPY? (n = 23)

YES	0%
NO	100%
5. CAN RCPs INTERPRET AND ANALYZE DATA FROM BRONCHOSCOPY? (n = 22)

YES	14%
NO	86%
6. MAIN PURPOSE FOR FIBEROPTIC BRONCHOSCOPY AT HOSPITAL (n = 15)

BIOPIES	60%
DIAGNOSTIC	33%
VARIOUS	07%
7. CAN RCPs ANALYZE DATA FROM HEMODYNAMIC MONITORING? (n = 23)

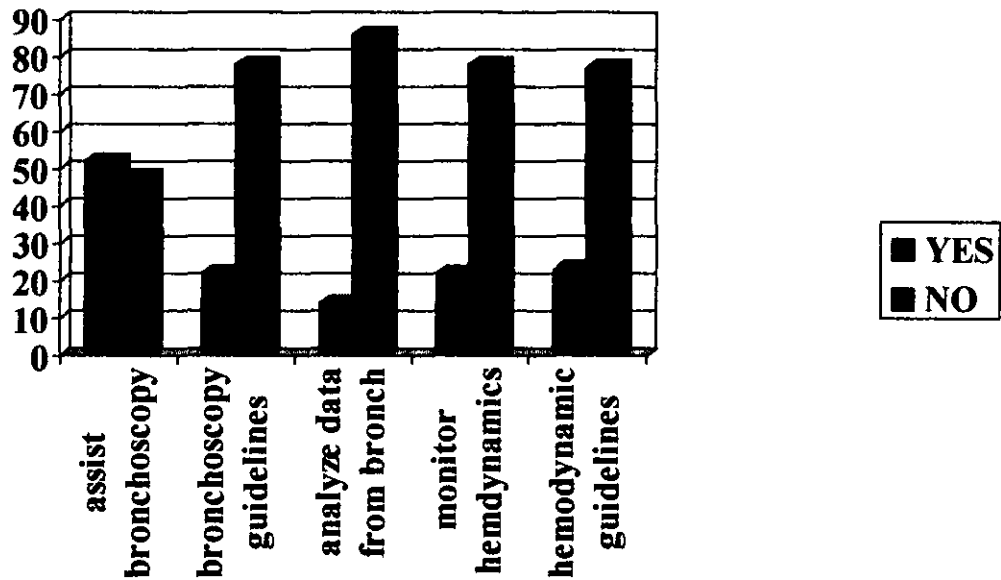
YES	22%
NO	78%
8. DO ANY RCPs PERFORM CATHETER INSERTION? (n = 23)

YES	0%
NO	100%
9. ARE THERE ANY DEPARTMENTAL GUIDELINES CONCERNING HEMODYNAMIC MONITORING? (n = 23)

YES	22%
NO	78%
10. ARE THERE ANY DEPARTMENTAL GUIDELINES CONCERNING FIBEROPTIC BRONCHOSCOPY PROCEDURES? (n = 22)

YES	23%
NO	77%

Graphic Summary (%)



ANALYSIS OF SURVEY RESULTS

The results distinctly support my hypothesis that other healthcare professions outside of respiratory therapy are assisting and interpreting information from fiberoptic bronchoscopies and hemodynamic monitoring. Out of the 11 surveys indicating that respiratory therapists do not assist the bronchoscopy procedure, five indicated that the surgery staff assisted and the other six indicated that nurses assisted the procedure.

CONCLUSION

Knowledge and training of the healthcare professional justifies the duties within their scope of practice. Respiratory therapists are clearly the best-qualified individuals to assist bronchoscopies due to the nature of the procedure, yet the results show that barely over 50% of the hospitals surveyed actually had their respiratory therapists assist the procedure at some point. Only 22% of the survey responses stated that respiratory therapists at their institution were proficient at analyzing data from hemodynamic monitoring. This suggests that respiratory therapists rarely have any exposure to hemodynamic monitoring even though it encompasses cardiopulmonary performance. The low percentage of respiratory therapy departments with guidelines on bronchoscopies and hemodynamic monitoring also expresses the concern for more aggressive maneuvers to recruit these special procedures under their area of care.

Hospitals large enough to employ a variety of healthcare professionals should be more attentive about the capabilities in each occupation's scope of practice. Respiratory care department managers should be educating their superiors about the therapeutic and diagnostic procedures that relate to the respiratory therapy profession and fall within their range of knowledge. A follow up survey should be performed to reveal if any department managers made any attempts or progress to secure these procedures. It has been shown that other professions outside of respiratory therapy can assist certain procedures, now it's time to prove that respiratory therapists are best for the job.

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